

**REMARKS:**

Claims 1-43 are pending in the present Application. Claim 10 stands rejected under the first paragraph of 35 U.S.C. § 112. Claims 1-14 stand rejected under 35 U.S.C. § 101. Claims 1 and 2 stand rejected under 35 U.S.C. § 102(b) over Maravall, Augustin, "Unobserved Components in Economic Time Series" from Handbook of Applied Econometrics, 1995, Blackwell Publishers Ltd, pp. 12-72 ("Maravall"). Claims 3-5 stand rejected under 35 U.S.C. § 103(a) over Maravall. Claims 6-14 stand rejected under 35 U.S.C. § 103(a) over Maravall in view of Leszczyc, Peter; Bass, Frank M, "Determining the Effects of Observed and Unobserved Heterogeneity on Consumer Brand Choice," 1998, John Wiley & Sons, pp. 1-115 ("Leszczyc"). The Office Action indicates that the same rejections apply to claims 15-43.

**REJECTION UNDER 35 U.S.C. § 112:**

Claim 10 stands rejected under the first paragraph of 35 U.S.C. § 112. The basis of this rejection is a recitation of "eliminating all the locally optimal base sales volume series for which an  $R^2$  statistical measure has a value *greater* than approximately 0.2." (Second emphasis added) However, by this Amendment the phrase in question of claim 10 has been amended to "eliminating all the locally optimal base sales volume series for which an  $R^2$  statistical measure has a value *less* than approximately 0.2." (Second emphasis added) Accordingly, claim 10 is considered to be fully compliant with the requirements of § 112. Therefore, reconsideration and withdrawal of the rejection of claim 10 is respectfully requested.

**REJECTION UNDER 35 U.S.C. § 101:**

Claims 1-14 stand rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter.

Applicants have amended independent claim 1 to clarify that the method is computer-implemented and that its steps are performed "using one or more processing

units." Thus, it is respectfully submitted that independent claim 1 and its dependent claims recite statutory subject matter in compliance with the requirements of 35 U.S.C. § 101.

For at least these reasons, Applicant submits that claims 1-14 are directed to statutory subject matter. The Applicant further submits that claims 1-14 are in condition for allowance. Therefore, the Applicant respectfully requests that the rejection of claims 1-14 under 35 U.S.C. § 101 be reconsidered and that claims 1-14 be allowed.

**REJECTION UNDER 35 U.S.C. § 102:**

Claims 1 and 2 stand rejected under 35 U.S.C. § 102(b) over Maravall. However, because Maravall fails to disclose all of the limitations of claim 1, Maravall cannot anticipate claim 1, or claim 2 which depends from claim 1.

Specifically, claim 1 recites:

A computer-implemented method for estimating base sales volume, the method being performed using one or more processing units, the method comprising:

using one or more processing units, accessing an input data series for a series of time periods, the input data for each time period comprising at least an actual sales volume for the time period, the actual sales volumes for the series of time periods collectively comprising an actual sales volume series;

within each iteration of an iterative process:

using one or more processing units, applying a low-pass filter to the actual sales volumes series to extract low frequency components representing a base sales volume series for the iteration;

using one or more processing units, **determining a locally optimal base sales volume series** for the iteration according to the input data series;

using one or more processing units, **selecting a globally optimal base sales volume series from among the locally optimal base sales volume series determined using the iterative process**, the globally optimal base sales volume series comprising an estimated base sales volume for each time period; and

using one or more processing units, making one or more of the estimated base sales volumes available for use in connection with at least one business analysis.

(Emphasis added) Thus, claim 1 is directed towards a computer-implemented method for estimating base sales volume that includes, for each iteration of an iterative process, determining a locally optimal base sales volume series, and further includes selecting a globally optimal base sales volume series from among the locally optimal base sales volume series.

In rejecting claim 1, the Office Action alleges that Maravall, at page 41, paragraphs 3 and 4 (“first Maravall citation”), anticipates “determining a locally optimal base sales volume series for the iteration according to the input data series,” and that Maravall, at page 43, paragraph 5, line 4 (“second Maravall citation”) anticipates “selecting a globally optimal base sales volume series from among the locally optimal base sales volume series determined using the iterative process.” However, this allegation is respectfully traversed as being contrary to fact. The first Maravall citation discusses an expression (“first Maravall expression”) for a standard assumption involving a conditional expectation ( $x_{it}$ ). Reading further, at paragraph 6 Maravall points out that “[t]here are two well-known procedures to compute the above conditional expectation. One is based on the Kalman filter, the other on the Wiener-Kolmogorov (WK) filter.” Turning next to the second Maravall citation, an expression (“second Maravall expression”) is disclosed that is an alternative expression of the Wiener-Kolmogorov filter. It should also be noted that the second Maravall expression is a state space expression that generates only a single state value rather than a series. The first Maravall expression and the second Maravall expression are parallel approaches presented in different formats. That being the case, it is clear that the second Maravall expression does not use data generated by the first Maravall expression. So, Maravall, particularly as alleged in the Office Action, fails to disclose, or even suggest, “determining a locally optimal base sales volume series for the iteration according to the input data series” and “selecting a globally optimal base sales volume series from among the locally optimal base sales volume series determined using the iterative process” as recited in claim 1, as well as claim 2 which depends from claim 1.

It should also be noted that the second Maravall expression is a state space expression that generates only a single state value rather than a series. That is, each iteration of the second Maravall expression gets the next period’s base volume. In

contrast, each iteration from the claimed invention gets a new base volume series for entire periods. For this additional reason, Maravall cannot anticipate claim 1 or claim 2 depending from claim 1.

For the reasons set forth herein, the Applicant submits that claims 1 and 2 are not anticipated by Maravall. The Applicant further submits that claims 1 and 2 are in condition for allowance. Therefore, the Applicant respectfully requests that the rejection of claims 1 and 2 be reconsidered and withdrawn, and that claims 1 and 2 be allowed.

Independent claims 15, 29, and 43 recite limitations that are similar to those discussed above in connection with claim 1. Accordingly, claims 15, 29, and 43, as well as their dependent claims, are considered patentable over Maravall for at least the same reasons discussed above in connection with claim 1. Therefore, the Applicant respectfully requests that the rejection of claims 15-43 be reconsidered and withdrawn, and that claims 15-43 be allowed.

#### **THE LEGAL STANDARD FOR OBVIOUSNESS REJECTIONS UNDER 35 U.S.C. § 102:**

The following sets forth the legal standards for "anticipation."

The events that can lead to anticipation can be divided into the following seven categories, all defined by statute:

1. Prior Knowledge: The invention was publicly known in the United States before the patentee invented it.

2. Prior Use: The invention was publicly used in the United States either (i) before the patentee invented it; or (ii) more than one year before he filed his patent application.

3. Prior Publication: The invention was described in a printed publication anywhere in the world either (i) before the patentee invented it; or (ii) more than one year before he filed his patent application.

4. Prior Patent: The invention was patented in another patent anywhere in the world either (i) before the patentee invented it; or (ii) more than one year before he filed his application.

5. On Sale: The invention was on sale in the United States more than one year before the patentee filed his application.

6. Prior Invention: The invention was invented by another person in the United States before the patentee invented it, and that other person did not abandon, suppress or conceal the invention.

7. Prior U.S. Patent: The invention was described in a patent granted on a patent application filed in the United States before the patentee made the invention.

Each of those seven events has its own particular requirements, but they all have the following requirements in common:

1. Anticipation must be shown by clear and convincing evidence.

2. If one prior art reference completely embodies the same process or product as any claim, the product or process of that claim is anticipated by the prior art, and that claim is invalid. To decide whether anticipation exists, one must consider each of the elements recited in the claim and determine whether all of them are found in the particular item alleged to be anticipating prior art.

3. There is no anticipation unless every one of those elements is found in a *single* prior publication, prior public use, prior invention, prior patent, prior knowledge or prior sale. One may not combine two or more items of prior art to make out an anticipation. One should, however, take into consideration, not only what is expressly disclosed or embodied in the particular item of prior art, but also what inherently occurred in its practice.

4. There cannot be an accidental or unrecognized anticipation. A prior duplication of the claimed invention that was accidental, or unrecognized, unappreciated, and incidental to some other purpose is not an invalidating anticipation.

Those four requirements must be kept in mind and applied to each kind of anticipation in issue. The following additional requirements apply to some categories of anticipation.

1. Prior Knowledge: An invention is anticipated if it was known by others in the United States before it was invented by the patentee. "Known," in this context, means known to the public. Private knowledge, secret knowledge or knowledge confined to a small, limited group is not necessarily an invalidating anticipation. Things that were known to the public only outside the United States are not invalidating anticipation.

2. Prior Use: An invention is anticipated if it was used by others before it was invented by the patentee, or more than one year before the patentee filed his patent application. "Use," in this context, means a public use.

3. Prior Publication: A patent is invalid if the invention defined by the claims was described in a printed publication before it was invented by the patentee or more than one year prior to the filing date of his application. For a publication to constitute an anticipation of an invention, it must be capable, when taken in conjunction with the knowledge of people of ordinary skill in the art, of placing the invention in the possession of the reader. The disclosure must be enabling and meaningful. In determining whether the disclosure is complete, enabling, and meaningful, one should take into account what would have been within the knowledge of a person of ordinary skill in the art at the time, and one may consider other publications that shed light on the knowledge such a person would have had.

4. Prior Patent: If the invention defined by the claims was patented in the United States or a foreign country, either before it was invented by the inventor or more than one year before the inventor filed his patent application, then the invention was anticipated. The effective date for this type of anticipation is the date on which two things co-existed: (i) the owner of the referenced patent had the right to enforce that patent; and (ii) the reference patent was available to the public. What was "patented" in the reference patent is determined by what is defined by its claims, interpreted in the light of the general description.

5. On Sale: A patent is invalid if the invention claimed in it was on sale in the United States more than one year prior to the application filing date.

6. Prior Invention: If the invention defined by the claims was invented by another person, in the United States, before it was invented by the inventor, and that other person did not abandon, suppress, or conceal the invention, the invention lacks novelty. A prior invention, even if put in physical form and shown to produce the desired result, is not an invalidating anticipation unless some steps were taken to make it public. However, it is not necessary that the inventor had knowledge of that prior invention.

7. Prior U.S. Application: A patent is invalid for lack of novelty if the invention defined by the claims was described in a United States patent issued on a patent application filed by another person before the invention was made by the inventor. The effective date of a prior application for purposes of this issue is the date on which it was filed in the United States. Foreign-filed patent applications do not apply. If the issued United States patent claims the benefit of more than one United States application, its effective date as an anticipation is the filing date of the first United States application that discloses the invention claimed in that referenced patent.

Experimental Use Exception: The law recognizes that it is beneficial to permit the inventor the time and opportunity to develop his invention. As such there is an "experimental use" exception to the "public use" and "on sale" rules. Even though the invention was publicly used or on sale, more than one year prior to the application filing date, that does not invalidate the patent, provided the principal purpose was experimentation rather than commercial benefit. If the primary purpose was experimental, it does not matter that the public used the invention or that the inventor incidentally derived profit from it.

When a public use or sale is shown, the burden is on the inventor to come forward with evidence to support the experimental use exception. Only experimentation by or under the control of the inventor qualifies for this exception. Experimentation by a third party, for its own purposes, does not qualify for this exception. Once the invention leaves the inventor's control, its use is a public one, even if further experimentation takes place.

The experimentation must relate to the claimed features of the invention. And it must be for the purpose of technological improvement, not commercial exploitation. If any commercial exploitation does occur, it must be merely incidental to the primary purpose of experimentation. A test done primarily for marketing, and only incidentally for technological improvement, is a public use.

**REJECTIONS UNDER 35 U.S.C. § 103(a):**

**Claims 3-5**

Claims 3-5 stand rejected under 35 U.S.C. § 103(a) over Maravall. However, because Maravall fails to disclose or suggest all of the limitations of claims 3-5, Maravall cannot render these claims obvious.

Specifically, because claims 3-5 depend from claim 1, the discussion above in connection with claim 1 applies equally to claims 3-5. As pointed out, Maravall fails to disclose or suggest “determining a locally optimal base sales volume series for the iteration according to the input data series” and “selecting a globally optimal base sales volume series from among the locally optimal base sales volume series determined using the iterative process” as recited in claim 1, as well as claims 3-5 which depend from claim 1. Therefore, since Maravall fails to disclose or suggest all of the limitations of claims 3-5, Maravall cannot render claims 3-5 obvious.

Accordingly, the Applicant submits that claims 3-5 are not anticipated or rendered obvious by Maravall. The Applicant further submits that claims 3-5 are in condition for allowance. Therefore, the Applicant respectfully requests that the rejection of claims 3-5 be reconsidered and withdrawn, and that claims 3-5 be allowed.

**Claims 6-14**

Claims 6-14 stand rejected under 35 U.S.C. § 103(a) over Maravall in view of Leszczyc. However, because the proposed combination of Maravall and Leszczyc fails to disclose or suggest all of the limitations of claims 6-14, the proposed combination of Maravall and Leszczyc cannot render these claims obvious.

Specifically, because claims 6-14 depend from claim 1, the discussion above in connection with claim 1 applies equally to claims 6-14. As pointed out, Maravall fails to disclose or suggest “determining a locally optimal base sales volume series for the iteration according to the input data series” and “selecting a globally optimal base sales volume series from among the locally optimal base sales volume series determined using the iterative process” as recited in claim 1, as well as claims 6-14 which depend from claim 1. Leszczyc fails to cure this deficiency. That is, Leszczyc fails to provide any teaching that can be properly combined with the teachings of Maravall so as to render at least the above-cited portions of claim 1 obvious. Therefore, since the proposed combination of Maravall and Leszczyc fails to disclose or suggest all of the limitations of claims 6-14, the proposed combination of Maravall and Leszczyc cannot render claims 6-14 obvious.

Accordingly, the Applicant submits that claims 6-14 are not anticipated or rendered obvious by the proposed combination of Maravall and Leszczyc. The Applicant further submits that claims 6-14 are in condition for allowance. Therefore, the Applicant respectfully requests that the rejection of claims 6-14 be reconsidered and withdrawn, and that claims 6-14 be allowed.

To the extent that the Examiner intends the rejections under 35 U.S.C. § 103(a) to apply to various ones of claims 15-43, Applicant hereby submits that claims 15-43 are considered patentable over Maravall and over the proposed combination of Maravall and Leszczyc for at least the same reasons discussed above in connection with claims 3-14. Therefore, the Applicant respectfully requests that the rejection of claims 15-43 be reconsidered and withdrawn, and that claims 15-43 be allowed.

#### **THE LEGAL STANDARD FOR OBVIOUSNESS REJECTIONS UNDER 35 U.S.C. § 103:**

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the

claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991); M.P.E.P. § 2142. Moreover, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988); M.P.E.P. § 2143.03.

With respect to alleged obviousness, there must be something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561 (Fed. Cir. 1986). In fact, the absence of a suggestion to combine is dispositive in an obviousness determination. *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573 (Fed. Cir. 1997). The mere fact that the prior art can be combined or modified does not make the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. § 2143.01. The consistent criterion for determining obviousness is whether the prior art would have suggested to one of ordinary skill in the art that the process should be carried out and would have a reasonable likelihood of success, viewed in the light of the prior art. Both the suggestion and the expectation of success must be founded in the prior art, not in the Applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991); *In re O'Farrell*, 853 F.2d 894 (Fed. Cir. 1988); M.P.E.P. § 2142.

A recent Federal Circuit case makes it clear that, in an obviousness situation, the prior art must disclose each and every element of the claimed invention, and that any motivation to combine or modify the prior art must be based upon a suggestion in the prior art. *In re Lee*, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002). Conclusory statements regarding common knowledge and common sense are insufficient to support a finding of obviousness. *Id.* at 1434-35.

**CONCLUSION:**

In view of the foregoing amendments and remarks, this application is considered to be in condition for allowance, and early reconsideration and a Notice of Allowance are earnestly solicited.

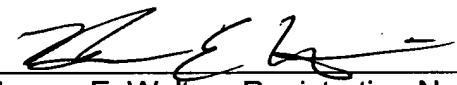
No fees are believed to be incurred by the filing of this Amendment. However, if a fee should be required, the Director is hereby to charge any such fee to Deposit Account No. **500777**. If an extension of time is required and there is no separate Petition for Extension of Time filed herewith, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed. Any fee required for such Petition for Extension of Time should be charged to Deposit Account No. **500777**.

**Please link this application to Customer No. 53184 so that its status may be checked via the PAIR System.**

Respectfully submitted,

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